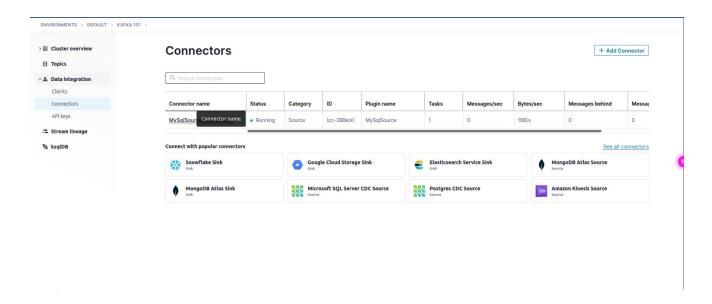1. What's a Key-Value (KV) database?
   - It is a non relational database that uses key-value methods to store data.
   - The KV databases are scalable and available
   - The disadvantage of the key-Value database is that it is suitable only for applications with single value and key.

2. Follow the following videos to deploy and use Redis and MySQL databases using GKE.
3. Follow the following video to set up sink and source Kafka connectors to the deployed MySQL database.

```
1  {
2      "bootstrap_servers": "pkc-6ojv2.us-west4.gcp.confluent.cloud:9092",
3      "Api key": "GQAEM7WAJ2I3JGNV",
4      "Api secret": "UL4e7pbA4AddFsObTDShVxmC/HSiik2dDqRxaZUac3M5eJ3vWSMyfn89K6WgJ+II"
5  }
```

```
partition:0
key:
value:
{'id': 7, 'name': 'bob6', 'email': 'bob6@abc.com', 'department': 'sales', 'modified': 1647584608000}

--------

partition:0
key:
value:
{'id': 8, 'name': 'bob7', 'email': 'bob7@abc.com', 'department': 'sales', 'modified': 1647584608000}

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partition:0
key:
value:
{'id': 9, 'name': 'bob8', 'email': 'bob8@abc.com', 'department': 'sales', 'modified': 1647584608000}

--------

partition:0
key:
value:
{'id': 10, 'name': 'bob9', 'email': 'bob9@abc.com', 'department': 'sales', 'modified': 1647584608000}
```

```python
value={'id':17,'name':"Ronaldo",'email':'Ronaldo@gmail.com','department':"Athlete",'modified':int(1000*time.time())};
producer = KafkaProducer(bootstrap_servers=bootstrap_servers,security_protocol='SASL_SSL',sasl_mechanism='PLAIN',\
    sasl_plain_username=sasl_plain_username,sasl_plain_password=sasl_plain_password,value_serializer=lambda m: encode
    (m))
producer.send('ToMySQL', value);
producer.close();
```

```
mysql> select * from myDB.ToMySQL;
+----+---------+--------------------+------------+-------------------------+
| id | name    | email              | department | modified                |
+----+---------+--------------------+------------+-------------------------+
| 15 | user    | test@gmail.com     | IT         | 2022-03-18 14:07:11.270 |
| 16 | Ashwin  | test@gmail.com     | IT         | 2022-03-18 14:07:44.801 |
| 17 | Ronaldo | Ronaldo@gmail.com  | Athlete    | 2022-03-18 14:16:07.695 |
+----+---------+--------------------+------------+-------------------------+
```